Coordinated approach to prevention and control of acute diarrhoea and respiratory infections

Acute diarrhoea and respiratory infections are high-burden diseases in the South-East Asia Region of WHO. Dedicated programmes for both during the 1980s and '90s were successful in reducing mortality among the under-5 population. But, despite these programmes, high morbidity persisted. Furthermore, with no focus in recent years, they have continued to lead the causes of under-5 deaths in the Region and also globally. This has been the main impediment in the achievement of Millennium Development Goals 4 in the Region.

Simple, safe, effective and yet relatively inexpensive interventions have been available for at least three decades but the underlying cause for the high burden appears to be poor access to and utilization of available services aimed at reducing mortality. Almost complete lack of focus on preventive interventions and overlooking the burden in other age groups appear to be the main reasons for the persistence of high morbidity from these diseases.

There is now a need to design and launch national programmes that encompass all age groups and integrate universal access to quality care with preventive interventions. These interventions need to be well coordinated and supported by strong advocacy, community mobilization and empowerment, training, research, monitoring and evaluation, and mobilization of national and international responses. WHO’s role should be to support Member States both technically and in mobilizing international response, including resources. This working paper presents an outline of such a programme for the Region.

The attached working paper (Doc. SEA/RC63/10) is submitted to the High-Level Preparatory (HLP) Meeting for its review and recommendations. The recommendations made by the HLP Meeting will be submitted to the Sixty-third Session of the Regional Committee for its consideration.
Coordinated approach to prevention and control of acute diarrhoea and respiratory infections
Background and rationale

1. Many countries in the WHO South-East Asia (SEA) Region are finding it difficult to achieve Millennium Development Goal 4 which calls for the reduction of child mortality as measured in 1990 by two thirds by the year 2015. This is mainly because acute diarrhoea and respiratory infections (ARI) continue to lead the infectious causes of both morbidity and mortality in the Region. Their combined burden in the SEA Region – 11.6% of the total disease burden – is more than the combined burden of neonatal infections, HIV/AIDS, malaria and TB. Pneumonia and acute diarrhoea remain the leading killers of young children despite the availability of simple, safe, effective and inexpensive interventions to reduce their capacity to do so. While continuing to be the leading causes of morbidity across all age groups, mortality from these diseases in above-5 populations is also considerable.

2. High morbidity and mortality from these diseases are closely related to poverty, malnutrition, and lack of access to care. The poorest of the poor, undernourished and marginalized communities suffer most and succumb to these diseases. Lack of safe drinking water and proper nutrition, grossly inadequate sanitation and hygiene, crowding with lack of household ventilation and perennial indoor air pollution are all important living conditions that promote diarrhoeal diseases and respiratory infections in these communities. Lack of a comprehensive programme to carry interventions for disease prevention and control to these hard-to-reach communities has further contributed to the persistence of the high burden. This paper, therefore, discusses the need and the outline of such a programme.

Relevance to the Millennium Development Goals and health services strengthening

3. A comprehensive programme to prevent and control acute diarrhoea and respiratory infections, mainly pneumonia, can be expected to directly and indirectly contribute to the Millennium Development Goals (MDGs) by contributing to the reduction of burden of communicable diseases (MDG 6). Reduction of child mortality through the programme will directly contribute to achieving MDG 4; and reduction of disease burden will indirectly contribute to poverty reduction (MDG 1). Such a programme can also be expected to contribute towards strengthening of health-care services and its delivery at the community and base-facility levels. This can also be expected to contribute in reducing, albeit by only a small extent, the gross health inequities that exist in our midst.

Disease burden

4. Worldwide every year, two million under 5 children are estimated to die from pneumonia and 1.87 million from acute diarrhoeal illnesses. Furthermore, the estimates of diarrhoeal deaths in recent years have begun to indicate a reversal of the declining trend seen in the previous
decade (Table 1). Diarrhoea claims the lives of 700 000 (37.4% of global deaths) and pneumonia 600 000 (30% of global deaths) under-5 children every year in the SEA Region, a disproportionately high burden of childhood deaths from both diseases.

5. Of the 156 million annual new cases of childhood pneumonia worldwide, 61 million cases occur in the SEA Region. Worldwide, there are an estimated 2.5 billion episodes of diarrhoea in children aged below five years. An average child in a developing country is estimated to suffer more than three episodes of acute diarrhoeal illness every year.

6. Besides young children, these diseases also cause high morbidity across all age groups. Globally, one third of primary health-care attendance by people above the age of five years is for respiratory symptoms. Acute lower respiratory tract infections, unrelated to TB or HIV/AIDS, account for an estimated 1.4 million deaths across all age groups in the Region. Regional disease burden, measured in terms of the disability-adjusted life years lost or DALYs lost annually from acute lower respiratory infections, is more than 28 million and the same from diarrhoeal diseases more than 23 million. The overall incidence of diarrhoeal diseases has remained consistently high over the past several decades without any visible indication of fall. Global annual deaths from acute diarrhoea in the over-5 population, hitherto considered relatively low, has been recently estimated at >1.1 million; most of them, however, occurring in sub-Saharan Africa and the SEA Region of WHO.

Table 1: Global under-5 mortality estimates from diarrhoeal diseases

<table>
<thead>
<tr>
<th>Year of estimate</th>
<th>Deaths per year in millions</th>
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<tbody>
<tr>
<td>1976</td>
<td>5</td>
</tr>
<tr>
<td>1982</td>
<td>4.6</td>
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<td>1986</td>
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<td>1997</td>
<td>2.4 - 2.9</td>
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<tr>
<td>2000</td>
<td>2.1 - 4.7</td>
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5 FERG Enteric Diseases Task Force. Preliminary results from the unpublished study commissioned by WHO presented at the FERG meeting, October 2009; Geneva.
7. Reliable estimates of pneumonia incidence or deaths are not available for adult populations. Demographic studies and extrapolations from surveillance of “native populations” in developed countries, suggest a high burden of pneumococcal disease in the adult populations of developing countries. Worldwide amongst the elderly, the annual incidence of community acquired pneumonia is estimated at 25-44/1000 population with mortality rates as high as 30%. No concrete estimate is available for the SEA region but the same is likely to be high.

8. A high proportion of AIDS patients not on antiretroviral therapy (ART) and a much higher incidence of pneumonic and diarrhoeal illnesses among such patients are also a matter of serious concern in the Region.

### Risk factors

9. Risk factors are many and multiple risk factors operate simultaneously in the Region, most of them closely related to prevalent poverty and social inequities. The unsafe water and sanitation situation, malnutrition, crowding, domestic environment including indoor air pollution and hygiene practices, and poor access to health-care services are the dominant ones. Hand hygiene needs a special mention as it is crucial in minimizing the spread of most organisms responsible for acute diarrhoeal and respiratory infections including pneumonia. Studies have shown that handwashing with soap and water, besides significantly reducing the incidence of diarrhoea, can also reduce the incidence of acute respiratory infections and pneumonia by up to 50%.

10. Acute diarrhoeal diseases, as a public health problem, are in general due to enteric infections in vulnerable populations caused by bacteria, viruses or parasites and fostered by

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suitable environmental conditions. Organisms such as vibrio cholerae, enterotoxigenic escherichia coli (ETEC), Rotavirus and Shigella species are particularly important in terms of their burden in the Region.

11. In the USA at the beginning of the 20th century, 19% of deaths in early childhood were estimated to be due to pneumonia, a figure strikingly similar to that of developing countries at present. A focus on nutrition and rapid improvement in living conditions of the general population brought about a drastic lowering of the mortality rate years before the advent and usage of antibiotics. Poverty and malnutrition underlie both the high incidence and deaths of young children from pneumonia in SEA Region countries. But poor access to health-care services and their poor utilization is largely responsible for high mortality.

12. Geographical or psychosocial remoteness leading to poor access and utilization of basic health-care services and preventive interventions by the poor and marginalized population groups has been a risk factor of major concern in the Region.

**Available interventions and their cost-effectiveness**

13. Preventive interventions in these areas including the provision of safe water and sanitation, promotion of handwashing and other hygienic practices, exclusive breastfeeding, complementary feeding after the age of six months, micronutrient supplements, especially zinc, and scaling up of immunization against measles, etc. have been shown to be effective in reducing the disease burden and are generally obtained at low cost. Oral rehydration therapy and antibiotics for case management are inexpensive and simple to administer in patients’ homes by community health workers with limited training. They have been available for at least three decades as effective tools to sharply bring down the mortality rates from both conditions.

**Additional/newer interventions and their relevance**

14. Newer knowledge such as low-osmolarity oral rehydration salts solution and zinc for diarrhoea and high-dose oral antibiotic to treat children with severe pneumonia at their homes adds further to the efficacy of case management without discernibly increasing the human or material cost of management.

15. Newer, easily administered vaccines have emerged as yet another tool to render the susceptible individuals and communities immune to certain diarrhoeal and respiratory diseases. The Region lacks reliable data on the proportion of pneumonia or diarrhoea cases attributable to a specific organism but there is evidence to believe that for pneumonia, primary or secondary, bacterial aetiology is of paramount importance. We recognize that some of the new vaccines, pneumococcal conjugate vaccine and haemophilus influenzae type b (Hib) for pneumonia and oral rotavirus and cholera vaccines for diarrhoea can be useful tools. The high cost of these newer vaccines -- some of them have to be imported into the Region -- is also an important issue for a number of member countries in the Region. Studies in Bangladesh and Indonesia have shown strikingly dissimilar impact on the disease burden due to the introduction of some of
these vaccines. Establishing the effective role of these newer vaccines in the Region by appropriate studies before their inclusion into the national immunization programmes has also been marred by other competing human interests.

**Issues and challenges**

16. Persistent high burden, especially the high child mortality rates from these diseases come in the way of achieving MDG 4 by many Member States in the Region. High disease burden from low implementation of the available preventive and control interventions, which are simple and safe, effective and yet inexpensive has been a major public health problem and its oversight by public health professionals and other decision-makers for more than a decade now has further contributed in keeping the burden high.

17. Over the years, dedicated prevention and control programmes for diarrhoeal diseases and respiratory infections having had their tangible impact on under-5 mortality rate, paved the way for institution-based Integrated Management of Childhood Illnesses (IMCI) that fostered treatment-seeking outside the home for a number of sicknesses, including acute diarrhoea and respiratory infections. There is a need to examine if there are some inherent weaknesses in our current approach to these diseases.

**Suboptimal access to and utilization of services**

18. In many member states in the SEA Region, coverage and performance of IMCI are yet to be optimal. In a recent report by UNICEF, in more than 40 of the 82 countries with available data, fewer than 50 per cent of the children with ARI were taken to a health-care provider. Children from the poorest families are significantly less likely to be brought to health facilities, and may receive lower quality care once they arrive. Preliminary results of the multi-country evaluation (MCE) indicate that even where impressive gains are made in the quality of care in health facilities, the level of care-seeking from these same facilities remains suboptimal. The reasons for suboptimal utilization of available services are diverse, including inadequate political commitment, fragmented implementation, and weak linkage between community and health facility components, and most importantly, lack of visibility from weak components of advocacy and social mobilization at the community level. Psychosocial barriers between the care-seeker and provider and weak capacity and poor motivation levels of health-care personnel are also contributory factors.

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11 www.unicef.org/specialsession/about/sreport-pdf/08_AcuteRespiratoryInfection_D7341Insert_English.pdf
Lack of focus on preventive interventions

19. Several interventions such as improved child nutritional practices, universal immunization coverage, improved water and air quality at homes, and improved hygiene and sanitation at the personal, domestic and community levels, especially handwashing have had their effectiveness proven in preventing acute diarrhoea and respiratory infections. They have not been pursued as a well coordinated programmatic intervention by any of the past or current programmes to control acute diarrhoea or respiratory infections.

Lack of interventions in other age groups

20. The disease burden spreads across the age spectrum with the highest magnitudes at the two extremes of the spectrum. And, the disease in one age group continues to remain the source of spread to other age groups in the same community. None of the programmes, past or the current, have considered implementing interventions to prevent or control acute diarrhoea or respiratory infections in age groups other than under-5.

Lack of surveillance, research, monitoring and evaluation, and community mobilization and empowerment

21. With the demise of the dedicated control programmes for these two diseases in the mid-1990s, the ever important tools employed to support and improve interventions for their control, viz. research, surveillance, monitoring and evaluation, and above all the mobilization and empowerment of communities gradually receded and the current programmes lack the support of these valuable elements. Communities are yet to take up the ownership of the programme.

Lack of an effective mechanism for intersectoral coordination

22. Effective prevention and control of a public health problem like acute diarrhoea and respiratory infections requires collaborative efforts from all relevant sectors, both within and outside health. Many sectors both within and outside health such as water, sanitation and hygiene, nutrition, immunization, health promotion and education, environmental development, etc show the potential for synergy with the diarrhoea and ARI control programmes if well coordinated. Collaboration with these sectors requires a sound structure and mechanism for coordination. Lack of such coordinating mechanism leaves the programme in isolation and the various efforts by other sectors remain fragmented and without proper linkages with the programme. Existing programmes in many Member States appear to lack such a mechanism; especially, the linkages with various preventive interventions and community efforts are missing.
Constraints and challenges

1. Unacceptably high burden and prolonged neglect of acute diarrhoea and respiratory infections have made it difficult for the Region to achieve the MDG 4 on child mortality.

2. High burden extends to age groups beyond 0-5 years.

3. High prevalence of multiple and mostly shared risk factors for both diarrhoea and pneumonia in the Region.

4. Simple, safe, effective and yet inexpensive interventions are available for both prevention and treatment and yet not implemented widely.

5. Programmes both within and outside the health sector with a potential for synergy in reducing the disease burden are not coordinated properly.

Regional strategy for prevention and control using an integrated and intersectoral approach

Rationale

23. The problem of the high disease burden despite the availability of several simple, safe, effective and yet inexpensive interventions for both prevention and treatment and their low implementation and utilization in Member States are compelling reasons for designing and implementing a programme that would integrate preventive interventions with improved community and facility-based case management, integrate prevention and control of pneumonia with that of acute diarrhoea, integrate interventions across the age spectrum, and achieve intersectoral coordination with sectors with a potential for synergy in reducing the burden of disease, both inside and outside health.

Guiding principles and strategic elements for the programme

24. It is being widely recognized that disease burden and mortality can be reduced by integrating case management at the community and facility levels with behavioural change interventions and other preventive measures, especially in areas such as nutrition, immunization, hygiene, and water and sanitation. Synergistic actions by existing programmes such as nutrition, immunization, environment and behavioural change interventions, etc. can be effective but have not been very widely pursued. Synergy through the integration of preventive and control strategies across the age spectrum is also possible. The new programme will need to seek such synergy through effective intersectoral collaboration and coordination. Synergy through intersectoral coordination and collaboration should also be sought from surveillance, research, monitoring and evaluation. Mobilizing national and international support and involvement of donor agencies, civil societies and other partners will also be equally important for such a programme. To sum up, the following are the broad guiding principles for taking a new approach to the prevention and control of acute diarrhoea and respiratory infections:
• Integrate prevention and control of acute diarrhoea with that of acute respiratory infections, especially pneumonia.

• Integrate case management with behavioural change interventions and preventive measures such as improvement in nutrition, immunization, water supply and quality at the point-of-use, environment, etc.

• Integrate preventive and control strategies across the age spectrum.

• Seek support for effective implementation of case management and preventive interventions from close coordination with surveillance, research, M&E, and advocacy for mobilizing national and international support and involvement of donor agencies, civil societies and other partners.

• Establish a sound structure and mechanism for collaboration and coordination among the relevant sectors.

25. In this background, a programme that adopts an integrated and intersectoral approach for the prevention and control of acute diarrhoea and respiratory infections (ICDR) is conceptualized.

Goal

26. The overall goal of the proposed programme is to reduce morbidity and mortality related to acute diarrhoeal and respiratory infections in Member States.

Objectives

• To integrate prevention and control of pneumonia with that of acute diarrhoea.

• To strengthen case management at the community and facility levels.

• To integrate case management with preventive interventions.

• To integrate prevention and control of pneumonia and acute diarrhoea across the age spectrum.

• To strengthen other essential elements for implementing the ICDR Programme.

• To establish a mechanism for intersectoral coordination with sectors inside and outside health.
Key strategic elements

(1) Integration of prevention and control of pneumonia with that of acute diarrhoea

27. Given the limited resources, similar target populations – impoverished, marginalized and in the extremes of the age spectrum – and similar underlying risk factors that require similar modes of control strategies, it is generally felt that efforts employed to prevent and control pneumonia should be integrated with those for acute diarrhoea.

(2) Strengthening case management at the community and facility levels

28. Improvements in care at health facilities through IMCI and other initiatives are imperative but not sufficient. While the efforts need to continue for strengthening and extending the reach of facility-based care, community-based management of acute diarrhoea and respiratory infections with appropriate health systems support for logistics, supervision and monitoring provides an effective approach for addressing the leading causes of child mortality, especially in resource-constrained settings. Success stories from this kind of approach have been published from the SEA Region and the approach needs to be scaled up.15,16

29. Case management of acute diarrhoea has been simplified since the advent of oral rehydration therapy with either appropriate home-based rehydrating fluids or oral rehydration salts solution. Continued feeding during illness and increased feeding after correcting dehydration will prevent or minimize the impact of illness on nutrition17,18,19 Use of antibiotics only in selected cases – cholera with severe dehydration or acute bloody diarrhoea – prevents unnecessary wastage of resources, harmful side-effects of the drug and the emergence of antimicrobial resistance.

30. Pneumonia management has relied upon its easy diagnosis and assessment by counting rates of breathing in a child and by looking for chest wall in-drawing. More than 70% of all fatal cases of childhood pneumonia have a bacterial cause, either as the primary or secondary offender. For about three decades now, WHO has advocated treatment of pneumonia with oral antibiotics at home and referral of severe cases to an appropriate facility.

31. In recent years, new developments that include: effective home management of severe but uncomplicated pneumonias with high dose oral amoxicillin\textsuperscript{20} and of diarrhoeal diseases with low-osmolarity oral rehydrating salt solutions and zinc supplements have emerged as even more effective public health tools for case management and prevention, but have not been intensely promoted so far.

\textit{(3) Integration of case management with preventive interventions}

32. Besides safe and cost-effective case management, the focus is needed on preventive and health promotional aspects with efforts aimed at mobilizing communities and empowering them. There is ample evidence of how a simple change in behaviour like hand-washing, exclusive breastfeeding for the first six months of life, starting complementary feeding at the appropriate time, etc. reduces the risk of diarrhoeal diseases and respiratory infections. Zinc supplement has emerged in recent years as yet another effective tool for the prevention of both diarrhoea and pneumonia in developing countries. These interventions are not being actively promoted in the needy communities. Other factors influencing morbidity and mortality due to acute diarrhoea and respiratory infections are water quality at the point of use, sanitation and indoor air quality. Strategies are also emerging for reducing indoor air pollution in affected communities. These interventions are outside the scope of the health sector per se but still possible to implement through effective collaboration and intersectoral coordination. Community and multisectoral participation, as well as good governance — prerequisites to improve hygiene and sanitation and also to improve indoor air quality at individual, household and societal levels — remain ignored and can be strengthened through effective coordination between programmes. Achieving universal coverage for the existing vaccines in the national immunization programme has to be a priority. Measles remains an important problem as a cause of both diarrhoea and pneumonia. Coordination with the immunization programme is crucial to achieve full coverage by this vaccine.

33. The Region lacks reliable data on the proportion of pneumonia or diarrhoea cases attributable to a specific organism but there is enough evidence to believe that for pneumonia, primary or secondary, bacterial aetiology is of paramount importance. Some of the new vaccines, pneumococcal conjugate vaccine and haemophilus influenzae Type B (Hib) for pneumonia and oral rotavirus and cholera vaccines for diarrhoea can be useful tools but an effective role of these newer vaccines, especially against pneumonia, is still not clear for the Region. Their high cost is also an important issue for a number of Member States in the Region. Studies in Bangladesh and Indonesia have shown strikingly dissimilar impact on the disease burden due to introduction of some of these vaccines.

(4) **Integration of prevention and control of pneumonia and acute diarrhoea across the age spectrum**

34. As the disease in one age group continues to remain the source of spread to other age groups in the same community, efforts at prevention and control by any new programme should be across the age spectrum. Such integration will bring value for money and will also be in line with the revitalized primary health-care approach. During the course of the programme implementation, efforts should also be made to strengthen primary health-care service delivery and build its capacity to absorb and implement the core components of the programme.

(5) **Strengthening other essential elements for implementing ICDR Programme**

35. A programme for implementing prevention and control interventions for acute diarrhoea and respiratory infections as envisaged above can function efficiently if supported by a good system of surveillance, monitoring and evaluation, and research at the local level aimed at improving implementation. Interventions at the community level will require mobilization and empowerment of communities and their due participation in planning, implementation and monitoring. Training of health workers at various levels will have to be a major component of the entire programme. Strong advocacy to garner support for the programme and seek appropriate national and international response will be required.

(6) **Intersectoral coordination with sectors inside and outside health**

36. Implementing the key elements of the prevention and control strategy for acute diarrhoea and respiratory infections will need integration of efforts from all the relevant sectors, within and outside of health. This is true for both prevention and case management. Integration requires intra- and interorganizational collaboration across different sectors such as disease surveillance, water, sanitation and hygiene, nutrition and food safety, family and child health, health promotion and education, mass media, agriculture and transport systems, besides the necessary support from finance, social security system and taxation policies. Prevention and control of high-burden conditions such as acute diarrhoea and lower respiratory tract infections in high-mortality and low-income countries could serve as an entry point for the revitalization of primary health care as the basic tool to build and improve health systems in these countries. Such intersectoral collaboration can be organized mainly in the form of multidisciplinary teams across the boundaries of different organizations and sectors. Intersectoral efforts in prevention and control of acute diarrhoea and respiratory infections should perhaps go beyond the public enterprise and seek to involve business and commercial enterprises, academia and voluntary agencies. Sustainable partnership and joint planning have to emerge from this effort. Such an organization, however, can be fragile and unstable at least in the initial phases and would require constant and intensive support from the management and national leadership.\(^{21}\) In fact, creating and stabilizing the integrating process by organizing such a collaboration is going to be the most crucial and effort-intensive part of the entire strategy of prevention and control.

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Prevention and control programmes such as the one envisaged here should take the frontal responsibility for the success of the intersectoral collaboration and integration of efforts from various sectors. Weaknesses in stabilizing primary health care in developing countries in the past may indeed have the strongest link in the failure to create and stabilize such collaborations.

**Targets for the Year 2015**

37. In keeping with the need to meet the Millennium Development Goals, the following targets are proposed from the programme by 2015. These targets are expected to make significant contribution, either directly or indirectly, towards meeting the MDGs 4, 6 and 1:

- Reduction of annual incidence of severe acute respiratory infections such as pneumonia in children by a quarter (25%) and the case-fatality rate by half (50%) of the baseline (current) level.
- Reduction of annual incidence and case-fatality rates due to pneumonia in the adult population by a quarter (25%) of the baseline (current) level.
- Reduction of annual incidence of acute diarrhoeal diseases in children by a quarter and case-fatality rate to half of the baseline (current) level.
- Reduction of annual incidence and case-fatality rates of acute diarrhoeal diseases in adult population to half of the baseline (current) level.

**Implementation of the regional strategy**

**Focus**

38. The proposed programme is expected to focus mainly on the following activities:

- Obtain national consensus and commitment on prevention and control of acute diarrhoea and respiratory infections.
- Establish a national working group at the Ministry of Health chaired by the Health Secretary or another policy-maker of similar rank and with representation from all the relevant sectors and stakeholders.
- Establish a unit and a focal point in the Ministry or the Directorate of Health Services under the department of infectious diseases to coordinate and put into operation national policies on acute diarrhoea and respiratory infections as put forth by the national working group.
- Conceptualize and develop a national strategic framework for ICDR programme through consensus, essentially including the scope and approaches for linkages with all the relevant sectors.
• Initiate advocacy at multiple levels for mobilizing national and international response and encourage/strengthen partnerships.

• Assess training needs; develop training curricula and modules; and organize training.

• Run surveillance and generate evidence on the disease burden, local risk factors, and available interventions.

• Develop and implement communication and social mobilization strategies for enhancing knowledge, awareness and responsive behaviour and multisectoral participation for fostering harmonized planning and oversight.

• Implement interventions, preventive and case management.

• Promote operations research particularly related to the enhancement of access to, acceptability and utilization of proposed interventions. Cost-effectiveness, affordability and feasibility of inclusion of Hib, pneumococcal conjugate vaccines and oral vaccines for cholera and rotavirus in the existing national immunization programmes and low-cost production of these vaccines within the SEA Region may be considered as next important steps in the research agenda.

• Implement the planned monitoring on a continual basis and perform periodic evaluation of the programme.

• Coordinate the feedback from the surveillance, research and M&E to the decision makers at various levels, including the national working group.

**Timeline**

39. The ICDR programme will be launched in Member States and supported by WHO over the strategy plan period of five years to contribute to the achievement of desired goals and targets.

**Monitoring and evaluation**

40. The prevention and control programme for acute diarrhoea and respiratory infections in Member States will require a sound mechanism for monitoring and evaluation implemented through the directives from the national working group and coordinated by the national focal point. National baseline data will need to be established at the onset of the programme. For M&E, the indicators and targets listed above will be utilized. The national working group will regularly review the data generated through M&E and provide guidance for programme modification as deemed necessary.

41. Similarly, regional reviews of the national programmes will be undertaken at yearly intervals through the WHO intercountry coordination mechanism. Towards the mid-term of the strategy plan period of four years a general assessment/evaluation of the programme will be made through the same mechanism.
Role of WHO

42. The WHO Regional Office for South-East Asia, as well as country offices in Member States of the Region will have roles to play in supporting and promoting this programme in the following key areas:

- To assist Member States in developing a consensus and providing their national commitment to the programme of integrated and intersectoral approach to prevent and control acute diarrhoea and respiratory infections (ICDR) in the Region.
- To assist the MoH in Member States to design a national ICDR programme and create an enabled environment for launching the programme.
- To assist the MoH in Member States in building capacity by facilitating training needs assessment; development of training curricula and modules; and organization of training.
- To provide technical support to the MoH for disease surveillance.
- To provide technical support and guidance for social mobilization, behaviour change interventions, M&E and operations research.
- To assist the MoH in Member States in mobilizing national and international support and in establishing/strengthening partnerships.
- Establish an intercountry coordination mechanism for regional annual reviews of ICDR programmes in Member States and a mid-term assessment/evaluation of the programmes.

Conclusion

43. Acute diarrhoea and respiratory infections are high-burden diseases in the South-East Asia Region of WHO. Dedicated programmes for both were successful in reducing mortality among the under-5 population. Despite the programmes, high morbidity persisted. Furthermore, in recent years they have continued to lead the causes of under-5 deaths in the Region and also globally. This has been the main impediment in the achievement of MDG 4 by the Region. Simple, safe, effective and yet relatively inexpensive interventions have been available for at least three decades but the underlying cause for the high burden appears to be poor access to and utilization of available services aimed at reducing mortality. Almost complete lack of focus on preventive interventions and overlooking the burden in other age groups appear to be the main reasons for the persistence of high morbidity from these diseases. There is now a need to design and launch national programmes that encompass all age groups and integrate universal access to quality care with preventive interventions. These interventions need to be well supported by strong advocacy, community mobilization and empowerment, training, research, monitoring and evaluation, and mobilization of national and international responses. WHO’s role should be to support Member States both technically and in mobilizing international response including resources. This working paper presents an outline of such a programme for the Region.